

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

Claim 1. (Currently Amended) A bone cement comprising in admixture a monomer-containing liquid portion and a particulate polymer portion, ~~characterized in that~~wherein at least one of said portions comprises a dissolved non-polymerizable organoiodine compound.

Claim 2. (Currently Amended) A bone cement comprising in admixture a monomer-containing liquid portion and a particulate polymer portion, ~~characterized in that~~wherein said liquid portion comprises a polymerizable organoiodine compound and ~~the polymeric structure of said particulate polymer has a polymeric structure comprising~~comprises covalently bonded residues of a polymerizable organoiodine compound.

Claim 3. (Currently Amended) A bone cement comprising in admixture a monomer-containing liquid portion and a particulate polymer portion, ~~characterized in that~~wherein said liquid portion comprises a polymerizable organoiodine compound and/or ~~the polymeric structure of said particulate polymer has a polymeric structure comprising~~comprises covalently bonded residues of a polymerizable organoiodine compound, wherein said polymerizable organoiodine compound comprises an organoiodine moiety covalently bonded via an amide bond, but not an ester bond, to a polymerizable moiety.

Claim 4. (Original) A bone cement having a chemically homogenized distribution of all components therein.

PRELIMINARY AMENDMENT
NS Entry of PCT/GB2004/001509

Claim 5. (Currently Amended) A—The bone cement as claimed in claim 4, wherein said cement comprises~~comprising~~ an X-ray contrast agent.

Claim 6. (Currently Amended) A—The bone cement as claimed in ~~any one of claims~~claim 1 to 5, wherein said cement additionally ~~comprising~~comprises an antibiotic compound.

Claim 7. (Currently Amended) A—The bone cement as claimed in claim 6, wherein said antibiotic compound is selected from the group consisting of gentamicin, colistin, erythromycin, clindamycin, penicillins, norfloxacin and chloramphenicol.

Claim 8. (Currently Amended) A—The bone cement as claimed in ~~either one of claims~~claim 6 and 7, wherein said antibiotic compound is present in the form of a lipophilic ester.

Claim 9. (Currently Amended) A—The bone cement as claimed in ~~any one of claims~~claim 1 to 8, wherein the concentration of the organoiodine compound within the polymer ~~particles~~particle portion differs by less than 50% compared to the concentration of the organoiodine within the polymer which is prepared *in situ* from the monomer during use.

Claim 10. (Currently Amended) A—The bone cement as claimed in ~~any one of claims~~claim 6 to 8, wherein the concentration of the antibiotic compound within the polymer ~~particles~~particle portion differs by less than 50% compared to the concentration of the organoiodine within the polymer prepared *in situ* from the monomer during use.

Claim 11. (Currently Amended) A—The bone cement as claimed in ~~either of claims~~claim 910, wherein the concentration of the antibiotic compound within the polymer ~~particles~~portion differs by less than 10% compared to the

PRELIMINARY AMENDMENT
NS Entry of PCT/GB2004/001509

concentration of the organoiodine within the polymer prepared in situ from the monomer during use ~~and 10 wherein said concentration difference is less than 100.~~

Claim 12. (Currently Amended) A ~~The~~ bone cement as claimed in ~~any of claims~~ claim 1 to 11, wherein said organoiodine compound is a cross-linking agent and is present in an amount of up to 2% wt of the composition.

Claim 13. (Currently Amended) A ~~The~~ bone cement as claimed in ~~any one of claims~~ claim 1 to 12, wherein the liquid ~~monomer~~ portion additionally comprises at least one of hydroquinone, growth hormone, BMP or vitamins.

Claim 14. (Currently Amended) A ~~The~~ bone cement as claimed in ~~any one of claims~~ claim 1 to 13, wherein said liquid ~~monomer~~ phase portion is present in a range of from 25 to 45% wt. of cement.

Claim 15. (Currently Amended) A ~~The~~ bone cement as claimed in ~~any one of claims~~ claim 1 to 14, wherein said polymer ~~particle~~ phase portion additionally comprises at least one of hydroquinone, growth hormone, BMP or vitamins.

Claim 16. (Currently Amended) A ~~The~~ bone cement as claimed in ~~any one of claims~~ claim 1 to 15, wherein said polymer particles of said polymer portion have a mode particle size of from 1 to 200 μm .

Claim 17. (Currently Amended) A ~~The~~ bone cement as claimed in ~~any one of claims~~ claim 1 to 16, wherein said polymer particles of said polymer portions are polydisperse.

Claim 18. (Currently Amended) A bone cement kit comprising a monomer-containing liquid portion and separate therefrom a particulate polymer portion, wherein at least one of said portions comprises a dissolved non-polymerizable organoiodine compound, said kit optionally ~~and preferably~~

PRELIMINARY AMENDMENT
NS Entry of PCT/GB2004/001509

further ~~comprising~~ comprises instructions for the preparation of a bone cement therewith.

Claim 19. (Currently Amended) A bone cement kit comprising a monomer-containing liquid portion and separate therefrom a particulate polymer portion, wherein said liquid portion comprises a polymerizable organoiodine compound and ~~the polymeric structure of said particulate polymer has a~~ polymer structure comprising ~~comprises~~ covalently bonded residues of a polymerizable organoiodine compound, said kit optionally ~~and preferably~~ further ~~comprising~~ comprises instructions for the preparation of a bone cement therewith.

Claim 20. (Currently Amended) A bone cement kit comprising a monomer-containing liquid portion and separate therefrom a particulate polymer portion, wherein said liquid portion comprises a polymerizable organoiodine compound and/or ~~the polymeric structure of said particulate polymer has a~~ polymer structure comprising ~~comprises~~ covalently bonded residues of a polymerizable organoiodine compound, wherein said polymerizable organoiodine compound comprises an organoiodine moiety covalently bonded via an amide bond, but not an ester bond, to a polymerizable moiety.

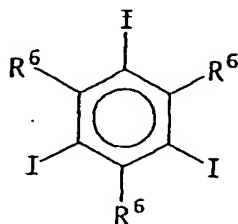
Claim 21. (Original) A bone cement kit providing a bone cement comprising a chemically homogeneous distribution of all components within the final bone cement.

Claim 22. (Currently Amended) ~~A~~ The bone cement kit as claimed in claim 21, wherein said cement comprises ~~comprising~~ an X-ray contrast agent.

Claim 23. (Currently Amended) ~~A~~ The bone cement kit as claimed in ~~either of claims~~ claim 21 ~~and 22~~, wherein said cement additionally ~~comprising~~ comprises an antibiotic agent.

PRELIMINARY AMENDMENT
NS Entry of PCT/GB2004/001509

Claim 24. (Currently Amended) An organoiodine compound of formula IV



wherein each R^6 group which may be the same or different, ~~comprises~~ is an acyloxyalkylcarbonylamino, N-(acyloxyalkylcarbonyl)acyloxyalkylamino, N-acyloxyalkylcarbonyl-N-alkylamino, acyloxyalkylaminocarbonyl, bis(acyloxyalkyl)aminocarbonyl, N-acyloxyalkyl-N-alkylaminocarbonyl, alkoxyalkylaminocarbonyl, N-alkylalkoxyalkylaminocarbonyl, bis(alkoxyalkyl)aminocarbonyl, alkoxyalkylcarbonylamino, N-alkylalkoxyalkylcarbonylamino or N-alkoxyalkylcarbonylalkoxyalkylamino group or a triiodophenyl group attached via a 1 to 10 atom bridge optionally substituted by an acyloxyalkyl, acyloxyalkylcarbonyl, acyloxyalkylamino, acyloxyalkylcarbonylamino, acyloxyalkylaminocarbonyl, alkoxyalkyl, alkoxyalkylcarbonyl, alkoxyalkylamino, alkoxyalkylcarbonylamino, or alkoxyalkylaminocarbonyl group or by a polymerizable group, or one or two R^6 groups is/are a polymerizable group, optionally attached via a 1 to 10 atom bridge; or where one R^6 group is a polymerizable group, and one or both of the remaining R^6 groups ~~may be~~ is an alkylamino, bisalkylamino, alkylcarbonylamino, N-alkyl-alkylcarbonylamino, alkylaminocarbonyl or bis-alkyl-aminocarbonyl group.

Claim 25. (Currently Amended) ~~An~~ The organoiodine compound as claimed in claim 24, wherein each R^6 group

PRELIMINARY AMENDMENT
NS Entry of PCT/GB2004/001509

~~comprises~~ is a triiodophenyl group attached via a 1 to 10 atom bridge composed of bridging atoms selected from O, N and C.

Claim 26. (Currently Amended) A method of producing a bone cement comprising admixing a liquid monomer portion and a particulate polymer portion, ~~characterized in that~~ wherein admixture of said portions is effected under helium.

Claim 27. (Currently Amended) ~~Method~~ A method for preparing ~~the~~ a particulate polymer of ~~the~~ a bone cement, wherein ~~said~~ polymer particles are formed by emulsion polymerization.

Claim 28. (Currently Amended) ~~A~~ The method as claimed in claim 27, wherein said emulsion is oil-in-water.

Claim 29. (Currently Amended) ~~A~~ The method as claimed in ~~either of claims~~ claim 27 ~~and 28~~, wherein ~~the aqueous phase of~~ the emulsion has an aqueous phase additionally ~~comprises~~ comprising an emulsifier.

Claim 30. (Currently Amended) A method of producing polymer particles by emulsion ~~polymerisation~~ polymerization ~~characterized in that~~ wherein salts are added to the aqueous phase.

Claim 31. (Currently Amended) A method of producing polymer particles by emulsion ~~polymerisation~~ polymerization, wherein the pH is adjusted by the addition of acids, bases or by the use of buffers.

Claim 32. (Currently Amended) ~~A~~ The method as claimed in ~~any one of claims~~ claim 27 ~~to 31~~, wherein ~~the polymerization is~~ is effected at a temperature ~~is~~ in the range of from 50 to 100°C.

Claim 33. (Currently Amended) ~~A~~ The method as claimed in claim 32, wherein ~~said~~ polymerization is effected at a ~~temperature is~~ in the range of from 70 to 80°C.

PRELIMINARY AMENDMENT
NS Entry of PCT/GB2004/001509

Claim 34. (Currently Amended) ~~A~~ The method as claimed in ~~any one of claims~~ claim 27 to 33, additionally comprising a ~~polymerisation~~ polymerization initiator.

Claim 35. (Currently Amended) ~~A~~ The method as claimed in claim 34, wherein said polymerization initiator is selected from the group consisting of benzyl peroxide (BPO), 2,2'-azo-bis-isobutyl nitrile (AIBN) and ~~tert.~~ t-butyl peroxybenzoate.

Claim 36. (Currently Amended) ~~A~~ The method for preparing an organoiodine compound as claimed in claim 24, wherein said compound is prepared from triiodophenyl carboxylic acids and amines.

Claim 37. (Currently Amended) ~~A~~ The method as claimed in claim 36, additionally comprising a ~~polymerisation~~ polymerization initiator.

Claim 38. (Currently Amended) ~~A~~ The method as claimed in claim 37, wherein said polymerization initiator is selected from the group consisting of N,N-dimethylp-toluidine, N,N-dimethylaminobenzyl alcohol (DMOH) and N,N-dimethylaminobenzyl oleate (DMAO).

Claim 39. (Currently Amended) ~~A~~ The method as claimed in ~~either of claims~~ claim 37 and 38, wherein said polymerization initiator is present in an amount up to 2% wt. of the composition.

Claim 40. (Currently Amended) A method of affixing a joint prosthesis comprising inserting said prosthesis and a bone cement into a bone cavity, ~~characterized in that~~ wherein said cement is a cement as claimed in ~~any one of claims~~ claim 1 to 3.

Claim 41. (Original) Bone cement characterized in that the mechanical properties regarding the ultimate tensile

PRELIMINARY AMENDMENT
NS Entry of PCT/GB2004/001509

strength and ultimate strain are greater than 10% higher than Palacos® bone.

Claim 42. (New) The bone cement as claimed in claim 9, wherein the concentration of the organoiodine compound within the polymer particles portion differs by less than 10% compared to the concentration of the organoiodine within the polymer prepared *in situ* from the monomer during use.